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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/810,462	MOORTI ET AL.	
	Examiner	Art Unit	
	Charles Chow	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-63* is/are pending in the application.

4a) Of the above claim(s) *1,2,5,8,11,12,15,18,21,22,25 and 28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *3,4,6,7,9,10,13,14,16,17,19,20,23,24,26,27 and 29-63* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☒ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Detailed Action

1. This is the office action in response to the RCE filed 1/18/2008.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 40-63 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 46-47 of copending Application No. 10/810,433 in view of following reasons.

Application No. 10/810,462:	Application No. 10/810,433:
Claim 40, a method for controlling an antenna system, the method comprising: dwelled on at least one of a plurality of antennas; selecting a starting antennas from said at least one of a plurality of antennas; selecting said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas as observed across one or more previous frames, determining at least one of a plurality of signal quality metrics for said dwelled on at least one of a plurality of antennas; and selecting for signal processing said portion of said	**Claim 46,** A system for controlling an antenna system, the system comprising: A processor that collects information associated with at least one of a plurality of frames received by a portion of a plurality of antennas; and said processor determines at least one starting antenna from said plurality of antennas based on said collected information received by said portion of said plurality of antennas using a majority polling schemes. **Claim 47,** The system according to claim 46, wherein said processor selects said determined at least one starting antenna based on the number of times said

dwelled on at least one of plurality of antennas based on said determined gain and said determined at least one of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antennas. **Claim 48,** a computer readable medium having stored thereon a computer program having at least one code section for controlling an antenna system, the at least one code section being executable by a computer for causing the computer to perform steps comprising: dwelled on at least one of a plurality of antennas; determining a gain for said dwelled on at least one of a plurality of antennas; selecting a starting antennas from said at least one of a plurality of antennas; selecting said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas as observed across one or more previous frames, determining at least one of a plurality of signal quality metrics for said dwelled on at least one of a plurality of antennas; and selecting for signal processing said portion of said dwelled on at least one of plurality of antennas based on said determined gain and said determined at least one of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antennas. **Claim 56,** a system for controlling an antenna system, the system comprising: a processor that dwells on at least one of a plurality of antennas; said processor determines a gain for said dwelled on at least one of a plurality of antennas; said processor selects a starting antennas from said at least one of a plurality of antennas; said processor selects said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas as observed across one or more previous frames, said processor determines at least one of a plurality of signal quality metrics for said dwelled on at least one of a plurality of antennas; and said processor selects for signal processing said portion of said dwelled on at least one of plurality of antennas based on said determined gain and said determined at least one of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antennas.	determined at least one starting antenna has been previously selected over a predetermined number of said received plurality of frames when utilizing said majority polling scheme. **Claim 11,** a machine readable storage having stored thereon, a computer program having at least one code section for controlling an antenna system, the at least one code section being executable by a machine for causing the machine to perform steps comprising: Dwelling on at least one of a plurality of antennas;.....

In the comparison table above, the claimed limitation features in claims 40, 48, 56 of application No. 10/810,462 are equivalent to the limitation features in claims 46, 47, 11 of the application No. 10/810,433.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:
A person shall be entitled to a patent unless –

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 9, 19, 29, 31-33, 46, 54, 62 are rejected under 35 U.S.C. 102(e) as being anticipated by Wright et al. [US 5,648,992].

For claims 9, 19, 29, 46, 54, 62, Wright teaches the method in claim 31 below, the computer readable medium, ASIC, comprising the code, above, the processor 25 selects an antenna; and

the wherein said at least one of a plurality of signal quality metrics may comprise at least one of the following: an estimated received power, a received power, a signal-to-noise ratio, a bit error rate, a packet error rate, a propagation channel characteristic, and/or a channel interference [the quality metrics, Rssi, Fvar, Tvar being utilized to determine the gain selection at 15/+18 dB, 17/0dB, 19/-20 dB, col. 4, lines 60-63].

For claim 31, Wright et al. [Wright] teaches a method for controlling an antenna system [steps in Fig. 8, Fig. 4, antennas 10, 12 in Fig. 3], the method comprising

dwelling on at least one of a plurality of antennas [dwelling on selected antenna 1 or 2, step 201, Fig. 8];

determining at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas [measuring Rssi at 21 of the dwelled antenna, Fig. 3; the measured quality metrics, Rssi, BER, frequency variance, Fvar, Timing variance Tvar, from receiver 26, of the dwelled antenna, col. 4, lines 53-59];

determining a gain for said dwelled-on at least one of a plurality of antenna 1/antenna 2, wherein said gain is based on at least one of the following: said at least one of said plurality of signal quality metrics [the processor 25 implements a gain control procedure via using, the quality metrics, Rssi, Fvar, Tvar to determine the gain selection at 15/+18 dB, 17/0dB, 19/-20 dB, col. 4, lines 60-63; the gain control in step 110/Fig. 4 & gain procedure in Fig. 9];

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas [selecting L1{n} portion from antenna 1 to process or selecting L2{n} portion from antenna 2 to process, in steps 201202,203, Fig. 8],

based on said determined gain [the determined gain in gain procedure in Fig. 9 via step 178 in Fig. 7; after checking the quality SQI is not good in step 170; to select antenna at step 180; for the antenna selection based on determined gain at step 178 and determined quality at step 170].] and

said determined at least one of a plurality of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antenna 1/antenna 2 [measuring Rssi at 21, Fig. 3; the measured quality metrics, Rssi, BER, Fvar, Tvar, from receiver 26, col. 4, lines 53-59; processor implements antenna diversity selection utilizing quality metrics, Rssi, BER, Fvar, Tvar, col. 4, lines 65-67].

Claim 32, Wright teaches a computer readable medium [ASIC] having stored thereon a computer program having at least one code section for controlling an antenna system, the at least one code section being executable by a computer for causing the computer to perform

steps [the processor software with stored procedures in ASIC, as the code section, which can be executed by processor 8051/6800, for the antenna selection in Fig. 4/Fig.8, col. 5, lines 3-10 & col. 9, lines 29-38],

the at least one code section being executable by a machine for causing the machine to perform the steps [the executable steps in Fig. 4 to Fig. 9, for antenna diversity selection] comprising

dwelling on at least one of a plurality of antennas [dwelling on selected antenna 1 or 2, step 201, Fig. 8];

determining at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas [measuring Rssi at 21 of the dwelled antenna, Fig. 3; the measured quality metrics, Rssi, BER, frequency variance, Fvar, Timing variance Tvar, from receiver 26, of the dwelled antenna, col. 4, lines 53-59];

determining a gain for said dwelled-on at least one of a plurality of antenna 1/antenna 2, wherein said gain is based on at least one of the following: said at least one of said plurality of signal quality metrics [the processor 25 implements a gain control procedure via using, the quality metrics, Rssi, Fvar, Tvar to determine the gain selection at 15/+18 dB, 17/0dB, 19/-20 dB, col. 4, lines 60-63; the gain control in step 110/Fig. 4 & gain procedure in Fig. 9];

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas [selecting L1{n} portion from antenna 1 to process or selecting L2{n} portion from antenna 2 to process, in steps 201202,203, Fig. 8],

based on said determined gain [the determined gain in gain procedure in Fig. 9 via step 178 in Fig. 7; after checking the quality SQI is not good in step 170; to select antenna at step 180; for the antenna selection based on determined gain at step 178 and determined quality at step 170].] and

said determined at least one of a plurality of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antenna 1/antenna 2 [measuring Rssi at 21, Fig. 3; the measured quality metrics, Rssi, BER, Fvar, Tvar, from receiver 26, col. 4, lines 53-59; processor implements antenna diversity selection utilizing quality metrics, Rssi, BER, Fvar, Tvar, col. 4, lines 65-67].

Claim 33, a system for controlling an antenna system [digital cordless telephone, DCt, TDD, system in col. 1, lines 9-35, having base station in Fig. 3] , the system comprising

a processor 25 [Fig. 3] that dwelling on at least one of a plurality of antennas [dwelling on selected antenna 1 or 2, step 201, Fig. 8];

said processor 25 determines at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas [measuring Rssi at 21 of the dwelled antenna, Fig. 3; the measured quality metrics, Rssi, BER, frequency variance, Fvar, Timing variance Tvar, from receiver 26, of the dwelled antenna, col. 4, lines 53-59];

said processor 25 determines a gain for said dwelled-on at least one of a plurality of antenna 1/antenna 2, wherein said gain is based on at least one of the following: said at least one of said plurality of signal quality metrics [the processor 25 implements a gain control procedure via using, the quality metrics, Rssi, Fvar, Tvar to determine the gain selection at 15/+18 dB, 17/0dB, 19/-20 dB, col. 4, lines 60-63; the gain control in step 110/Fig. 4 & gain procedure in Fig. 9];

said processor 25 selects for signal processing a portion of said dwelled-on at least one of a plurality of antennas [selecting L1{n} portion from antenna 1 to process or selecting L2{n} portion from antenna 2 to process, in steps 201202,203, Fig. 8],

based on said determined gain [the determined gain in gain procedure in Fig. 9 via step 178 in Fig. 7; after checking the quality SQI is not good in step 170; to select antenna at

step 180; for the antenna selection based on determined gain at step 178 and determined quality at step 170]; and

said determined at least one of a plurality of powers from said dwelled on at least one of a plurality of antenna 1/antenna 2 [measuring Rssi power at 21, Fig. 3; the measured quality metrics, Rssi, BER, Fvar, Tvar, from receiver 26, col. 4, lines 53-59; processor implements antenna diversity selection utilizing quality metrics, Rssi, BER, Fvar, Tvar, col. 4, lines 65-67].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3, 6, 13, 16-17, 23, 26-27, 34-41, 43-45, 48-49, 51-53, 56-57, 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over view of in Wright in view of Miyanaga et al. [US 2002/0168,039 A1].

For claims 34, 36, 38, Wright the method in claims 31-33 above, but fails to teach the selecting a starting antenna from said at least one of a plurality of antennas; the selecting said starting antenna based on prior history of said selection of said portion of dwelled-on at least one of a plurality of antennas.

Miyanaga et al. [Miyanaga] teaches the selecting a starting antenna from said at least one of a plurality of antennas; the selecting said starting antenna based on prior history of said selection of a portion of said dwelled on at least one of a plurality of antennas [the selecting of a new antenna for the antenna branches for 10a-10z, Fig. 1, based on the previous selection result stored in the 18, branches associated with 24a/24z to switch 17,

paragraph 0027-0028, 0052, abstract; for the detected frames in Fig. 2, paragraph 0054], in order to avoid the wrong selection having a poor reception quality [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Wright with Miyanaga's antenna branch selection based on the previous selection result, such that the wrong antenna branch selection having poor quality could be avoid.

For claims 35, 37, 39, Wright teaches the method in claim 31 above; the computer readable medium, ASIC, comprising the code, above, the processor 25 selects an antenna, but fails to teach the selecting said starting antenna based on prior history of said selection of said portion of dwelled-on at least one of a plurality of antennas.

Miyanaga teaches the selecting said starting antenna based on prior history of said selection of said portion of dwelled-on at least one of a plurality of antennas

[the selecting of a new antenna for the antenna branches for 10a-10z, Fig. 1, based on the previous selection result stored in the 18, branches associated with 24a/24z to switch 17, paragraph 0027-0028, 0052, abstract; for the detected frames in Fig. 2, paragraph 0054], in order to avoid the wrong selection having a poor reception quality [abstract], such that the wrong antenna branch selection having poor quality could be avoid, as the rationale to combine Miyanaga to Wright.

For claims 3, 13, 23, 17, 27, 34, 36, 38, 41, 44, 49, 52, 57, 60, Wright teaches the method in claim 31 above; the computer readable medium, ASIC, comprising the code, above, the processor 25 selects an antenna, but fails to teach the selecting said starting antenna based on a predetermined criteria.

Miyanaga teaches the selecting said starting antenna based on a predetermined criteria

[the invalid data, as the predetermined criteria, is excluded from antenna branch selection, step S103, Fig. 5], in order to select a good reception signal by excluding the invalid data reception, as the rationale to combine Miyanaga to Wright.

For claims 6, 16, 26, 43, 51, 59 Wright teaches the method in claim 31 above; the computer readable medium, ASIC, comprising the code, above, the processor 25 selects an antenna, the automatic gain control [gain control from processor 25 to select gain of +18dB, 0dB, -20 dB, Fig. 3, but fails to teach the determining a starting antenna.

Miyanaga teaches the selecting said starting antenna [the selecting of a new antenna for the antenna branches for 10a-10z, Fig. 1, based on the previous selection result stored in the 18, branches associated with 24a/24z to switch 17, paragraph 0027-0028, 0052, abstract; for the detected frames in Fig. 2, paragraph 0054], in order to avoid the wrong selection having a poor reception quality [abstract].

For claim 40, a system for controlling an antenna system [digital cordless telephone, DCt, TDD, system in col. 1, lines 9-35, having base station in Fig. 3] , the method comprising

dwelled on at least one of a plurality of antennas [dwelling on selected antenna 1 or 2, step 201, Fig. 8];

determining a gain for said dwelled-on at least one of a plurality of antenna 1/antenna 2, [the processor 25 implements a gain control procedure via using, the quality metrics, Rssi, Fvar, Tvar to determine the gain selection at 15/+18 dB, 17/0dB, 19/-20 dB, col. 4, lines 60-63; the gain control in step 110/Fig. 4 & gain procedure in Fig. 9].

said determined at least one of a plurality of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antenna 1/antenna 2 [measuring Rssi at 21, Fig. 3; the measured quality metrics, Rssi, BER, Fvar, Tvar, from receiver 26, col. 4, lines 53-59;

processor implements antenna diversity selection utilizing quality metrics, Rssi, BER, Fvar, Tvar, col. 4, lines 65-67].

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas [selecting L1{n} portion from antenna 1 to process or selecting L2{n} portion from antenna 2 to process, in steps 201202,203, Fig. 8],

based on said determined gain [the determined gain in gain procedure in Fig. 9 via step 178 in Fig. 7; after checking the quality SQI is not good in step 170; to select antenna at step 180; for the antenna selection based on determined gain at step 178 and determined quality at step 170].] and

said determined at least one of a plurality of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antenna 1/antenna 2 [measuring Rssi at 21, Fig. 3; the measured quality metrics, Rssi, BER, Fvar, Tvar, from receiver 26, col. 4, lines 53-59; processor implements antenna diversity selection utilizing quality metrics, Rssi, BER, Fvar, Tvar, col. 4, lines 65-67].

Wright fails to teach the selecting a starting antenna; selecting said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas observed across one or more previous frames.

Miyanaga et al. [Miyanaga] teaches the selecting a starting antenna from said at least one of a plurality of antennas; selecting said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas observed across one or more previous frames [the selecting of a new antenna for the antenna branches for 10a-10z, Fig. 1, based on the previous selection result stored in the 18, branches associated with 24a/24z to switch 17, paragraph 0027-0028, 0052, abstract; for the detected frames in Fig. 2, paragraph 0054], in order to avoid the wrong selection having

a poor reception quality [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Wright with Miyanaga's antenna branch selection based on the previous selection result, such that the wrong antenna branch selection having poor quality could be avoid.

For claim 45, 53, 61, Wright teaches the method in claim 31 above; the computer readable medium, ASIC, comprising the code, above, the processor 25 selects an antenna,

the determining said at least one of said determined gain for said dwelled-on at least one of a plurality of antennas based on said at least one of a plurality of signal quality metrics [measuring Rssi power at 21, Fig. 3; the measured quality metrics, Rssi, BER, Fvar, Tvar, from receiver 26, col. 4, lines 53-59; processor implements antenna diversity selection utilizing quality metrics, Rssi, BER, Fvar, Tvar, col. 4, lines 65-67]

and/or a portion of said determined gain for said dwelled-on at least one of a plurality of antennas [the determined gain in gain procedure in Fig. 9 via step 178 in Fig. 7; after checking the quality SQI is not good in step 170; to select antenna at step 180; for the antenna selection based on determined gain at step 178 and determined quality at step 170].

For claim 48, Wright teaches a computer readable medium [ASIC] having stored thereon a computer program having at least one code section for controlling an antenna system, the at least one code section being executable by a computer for causing the computer to perform steps [the processor software with stored procedures in ASIC, as the code section, which can be executed -by processor 8051/6800, for the antenna selection in Fig. 4/Fig.8, col. 5, lines 3-10 & col. 9, lines 29-38],

the at least one code section being executable by a machine for causing the machine to perform the steps [the executable steps in Fig. 4 to Fig. 9, for antenna diversity selection] comprising

dwelling on at least one of a plurality of antennas [dwelling on selected antenna 1 or 2, step 201, Fig. 8];

determining a gain for said dwelled-on at least one of a plurality of antenna 1/antenna 2, wherein said gain is based on at least one of the following: said at least one of said plurality of signal quality metrics [the processor 25 implements a gain control procedure via using, the quality metrics, Rssi, Fvar, Tvar to determine the gain selection at 15/+18 dB, 17/0dB, 19/-20 dB, col. 4, lines 60-63; the gain control in step 110/Fig. 4 & gain procedure in Fig. 9];

determining at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas [measuring Rssi at 21 of the dwelled antenna, Fig. 3; the measured quality metrics, Rssi, BER, frequency variance, Fvar, Timing variance Tvar, from receiver 26, of the dwelled antenna, col. 4, lines 53-59];

selecting for signal processing a portion of said dwelled-on at least one of a plurality of antennas [selecting L1{n} portion from antenna 1 to process or selecting L2{n} portion from antenna 2 to process, in steps 201202,203, Fig. 8],

based on said determined gain [the determined gain in gain procedure in Fig. 9 via step 178 in Fig. 7; after checking the quality SQI is not good in step 170; to select antenna at step 180; for the antenna selection based on determined gain at step 178 and determined quality at step 170].] and

said determined at least one of a plurality of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antenna 1/antenna 2 [measuring Rssi at 21, Fig. 3; the measured quality metrics, Rssi, BER, Fvar, Tvar, from receiver 26, col. 4, lines 53-59;

processor implements antenna diversity selection utilizing quality metrics, Rssi, BER, Fvar, Tvar, col. 4, lines 65-67].

Wright fails to teach the selecting a starting antenna; selecting said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas observed across one or more previous frames.

Miyanaga et al. [Miyanaga] teaches the selecting a starting antenna from said at least one of a plurality of antennas; selecting said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas observed across one or more previous frames [the selecting of a new antenna for the antenna branches for 10a-10z, Fig. 1, based on the previous selection result stored in the 18, branches associated with 24a/24z to switch 17, paragraph 0027-0028, 0052,; for the detected frames in Fig. 2, paragraph 0054], in order to avoid the wrong selection having a poor reception quality [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Wright with Miyanaga's antenna branch selection based on the previous selection result, such that the wrong antenna branch selection having poor quality could be avoid.

For claim 56, a system for controlling an antenna system [digital cordless telephone, DCt, TDD, system in col. 1, lines 9-35, having base station in Fig. 3] , the system comprising

a processor 25 [Fig. 3] that dwelling on at least one of a plurality of antennas [dwelling on selected antenna 1 or 2, step 201, Fig. 8];

said processor 25 determines a gain for said dwelled-on at least one of a plurality of antenna 1/antenna 2, wherein said gain is based on at least one of the following: said at least one of said plurality of signal quality metrics [the processor 25 implements a gain control procedure via using, the quality metrics, Rssi, Fvar, Tvar to determine the gain

selection at 15/+18 dB, 17/0dB, 19/-20 dB, col. 4, lines 60-63; the gain control in step 110/Fig. 4 & gain procedure in Fig. 9];

said processor 25 determines at least one of a plurality of signal quality metrics for said dwelled-on at least one of a plurality of antennas [measuring Rssi at 21 of the dwelled antenna, Fig. 3; the measured quality metrics, Rssi, BER, frequency variance, Fvar, Timing variance Tvar, from receiver 26, of the dwelled antenna, col. 4, lines 53-59];

said processor 25 selects for signal processing a portion of said dwelled-on at least one of a plurality of antennas [selecting L1{n} portion from antenna 1 to process or selecting L2{n} portion from antenna 2 to process, in steps 201202,203, Fig. 8],

based on said determined gain [the determined gain in gain procedure in Fig. 9 via step 178 in Fig. 7; after checking the quality SQI is not good in step 170; to select antenna at step 180; for the antenna selection based on determined gain at step 178 and determined quality at step 170].] and

said determined at least one of a plurality of a plurality of signal quality metrics from said dwelled on at least one of a plurality of antenna 1/antenna 2 [measuring Rssi at 21, Fig. 3; the measured quality metrics, Rssi, BER, Fvar, Tvar, from receiver 26, col. 4, lines 53-59; processor implements antenna diversity selection utilizing quality metrics, Rssi, BER, Fvar, Tvar, col. 4, lines 65-67].

Wright fails to teach the selecting a starting antenna; selecting said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas observed across one or more previous frames.

Miyanaga et al. [Miyanaga] teaches the selecting a starting antenna from said at least one of a plurality of antennas; selecting said starting antenna based on prior history of selection of a portion of said dwelled on at least one of a plurality of antennas observed

across one or more previous frames [the selecting of a new antenna for the antenna branches for 10a-10z, Fig. 1, based on the previous selection result stored in the 18, branches associated with 24a/24z to switch 17, paragraph 0027-0028, 0052,; for the detected frames in Fig. 2, paragraph 0054], in order to avoid the wrong selection having a poor reception quality [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Wright with Miyanaga's antenna branch selection based on the previous selection result, such that the wrong antenna branch selection having poor quality could be avoid.

5. Claims 4, 14, 24, 42, 50, 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over view of in Wright in view of Miyanaga-'039 and Suzuki [US 5,787,122].

For claims 4, 14, 24, 42, 50, 58, Wright teaches the method in claim 31 above; the computer readable medium, ASIC, comprising the code, above, the processor 25 selects an antenna, but fails to teach the selecting said starting antenna based on random selection

Miyanaga teaches the selecting a starting antenna from said at least one of a plurality of antennas [the selecting of a new antenna for the antenna branches for 10a-10z, Fig. 1, based on the previous selection result stored in the 18, branches associated with 24a/24z to switch 17, paragraph 0027-0028, 0052,; for the detected frames in Fig. 2, paragraph 0054], in order to avoid the wrong selection having a poor reception quality [abstract]. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Wright with Miyanaga's antenna branch selection based on the previous selection result, such that the wrong antenna branch selection having poor quality could be avoid.

Wright, Miyanaga fail to teach the selecting a antenna based on random selection.

Suzuki teaches the selecting a antenna based on random selection [the selecting of antenna, starting antenna, based on the randomly selection M-series data in col. 9, lines 13-26, Fig. 10; the control unit 78 of a receiving station is obviously having the code for selecting a antenna based on the random selection], in order to select an starting antenna based the random number, as the starting point of selecting an antenna, as the rationale to combine Suzuki to Wright, Miyanaga.

6. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over view of in Wright in view of Lyons [US 6,922,549 B2]

For claim 7, Wright teaches the method in claim 31 above, but fails to teach the selecting an antenna dwelling order based on a predetermined criteria.

Lyons teaches the antenna selection for dwelling onto it based on a predetermined criteria [the antenna selection is based on the PER value to maintain packet error rate PER at 5% or 20%, as the selection order based on the predetermined criteria, PER, col. 14, lines 32-44; for the diversity antenna selection in Fig. 4-5; the code, instruction, executed by the processor in col. 16, lines 4-40], in order to improve the sequential antenna selection order, by maintaining the data error rate low at 5%, as the rationale to combine Lyons to Wright.

7. Claims 10, 20, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over view of in Wright in view of Todd [US 6,002,672].

For claims 10, 20, 30, Wright teaches the method in claim 31 above, the computer readable medium, ASIC, comprising the code, above, the processor 25 selects an antenna,

but fails to teach the antenna selection based on meeting a specified range of values for at least one of said plurality of signal quality metrics.

Todd teaches these features [the antenna selection is to meet the BER threshold thr20 having a BER range greater than 0% and less than, equal to 8%, 440 in Fig. 4b, 19-30], for controlling the quality metrics BER in a low error range. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Wright with Todd's BER quality metrics, in order to provide tolerable BER range for the antenna selection.

8. Claims 47, 55, 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over view of in Wright in view of Miyanaga, as applied to claims 40, 48, 56, and further in view of Todd [US 6,002,672].

For claims 47, 55, 63, Wright teaches the method in claim 31 above; the computer readable medium, ASIC, comprising the code, above, the processor 25 selects an antenna, but fails to teach the antenna selection based on meeting a specified range of values for at least one of said plurality of signal quality metrics.

Todd teaches these features [the antenna selection is to meet the BER threshold thr20 having a BER range greater than 0% and less than, equal to 8%, 440 in Fig. 4b, 19-30], for controlling the quality metrics BER in a low error range. Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to upgrade Wright with Todd's BER quality metrics, in order to provide tolerable BER range for the antenna selection.

Response to Arguments

9. Applicant's arguments with respect to claims 3-4, 6-7, 9-10, 13-14, 16-17, 19-20, 23-24, 26-27, 29-63 have been considered but are moot in view of the new ground(s) of rejection.

Regarding applicant's amendment in the claims based on argument for the no teachings of the limitation features in the independent claims 31-33, 40, 48, 56, of amendment, 1/18/2008, Wright et al [US 5,648,992] & Miyanaga et al. [2002/0168,039 A1], Todd [US 6,002,672], teach the claimed limitation features as shown in the claim rejections above.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Chow whose telephone number is (571) 272-7889. The examiner can normally be reached on 8:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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February 16, 2008.

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